STATE BOARD OF EQUALIZATION
STAFF LEGISLATIVE BILL ANALYSIS

Date Amended:	**04/05/01**	Bill No:	**SB 1074**
Tax:	**Sales and Use**	Author:	**Soto**
Board Position:	**Neutral**	Related Bills:	**SB 1X (Soto)** **AB 695 (Pescetti)** **AB 27X (Pescetti)** **AB 51X (Daucher)** **AB 58X (Cox)** **AB 124X (Pescetti)** **AB 1319 (Cox)** **SB 877 (Poochigian)**

BILL SUMMARY

This bill would provide a sales and use tax exemption until January 1, 2003 for sales and purchases of microturbines, fuel cells, photovoltaic cells, solar thermal water heating systems, wind energy equipment, and electrical generators operating on renewable biomass fuel.

ANALYSIS

Current Law

Under existing law, the sales or use tax applies to the sale or use of tangible personal property in this state, unless otherwise exempted or excluded by statute. Under current law, the sales and use tax applies to sales and purchases of equipment used to generate electricity to the same extent as it applies to any other sale of tangible personal property that is not otherwise exempted or excluded from tax by statute.

Revenue and Taxation Code Section 6353.5, however, provides a sales and use tax exemption for sales and purchases of gas and electricity when delivered to consumers through mains and lines.

Proposed Law

This bill would add Section 6367.5 to the Sales and Use Tax Law to exempt sales and purchases of microturbines, fuel cells, photovoltaic cells, solar thermal water heating systems, wind energy equipment, and electrical generators operating on renewable biomass fuel.

The bill would become operative immediately.

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In General

The California Energy Commission, with the passage of Senate Bill 90 (Sher, Ch. 905, Stats. 1997), has the authority to administer funds collected from the state's investor-owned utilities to support renewable energy technologies. Assembly Bill 1890 (Brulte, et al., Ch. 854, Stats. 1996), which also deregulated the electricity industry, established a new statewide renewables policy by providing $540 million collected from Southern California Edison, Pacific Gas and Electric Company, and San Diego Gas & Electric over four years beginning in 1998 to support existing, new and emerging renewable technologies from 1998 to 2001.

AB 1890 also required the Energy Commission to submit a report to the Legislature outlining allocation and distribution recommendations for those renewables funds. This report, as adopted by the Legislature, became SB 90 - the administrative guidelines for the Renewable Energy Program.

Senate Bill 90 implemented the report's recommendations and creates a Renewable Resource Trust Fund containing four accounts: the Existing Renewable Resources Account, the New Renewable Resources Account, the Emerging Renewable Resources Account (Buy-Down Program), and the Customer-Side Renewable Resources Purchases Account.

The “Buy-Down Program” provides cash rebates on eligible renewable energy electric-generating systems, such as small wind turbines, fuel cells, solar photovoltaics and other solar power generating equipment – similar to the equipment included within this proposed exemption. The Commission provides a rebate of up to $3,000 per kilowatt, or 50 percent off the system purchase price (whichever is less) of certified equipment.

COMMENTS

1. **Sponsor and purpose.** This bill is sponsored by the author and is intended to provide an exemption for these renewable energy generators in order to encourage energy independence for users who are able to acquire self-generating equipment.

2. **What is a microturbine, fuel cell, etc.?** In order to avoid any ambiguity in administering the proposed exemption, it is recommended that precise definitions for the equipment the author intends to be included within the exemption be incorporated into the bill. For example, a microturbine could be defined as a wind turbine that generates a specified number of kilowatts.

3. **Should the proposed exemption apply to utility companies?** As drafted, the proposed exemption would include purchases of qualifying equipment by utility companies and other electric service suppliers. Should the bill be limited to electricity customers, rather than service suppliers?

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4. **Bill should have a delayed operative date.** The exemption would become effective immediately. However, this would not enable the Board to timely notify affected retailers of the provisions of the exemption. Although enactment of this measure would likely be widely publicized through the media, many retailers are hesitant to sell items without obtaining tax reimbursement until they receive "official" notification from the Board that tax is not due. Consequently, it is recommended that the exemption be operative no sooner than 30 days from the date the bill is enacted.

5. **Related legislation.** Several sales and use tax measures have been introduced this session to respond to California's energy crisis. These include the following:

   SB 1X (Soto) - This bill would provide an exemption similar to this measure .

   AB 695 (Pescetti) - This measure would provide a sales and use tax exemption for sales and purchases of energy efficient residential and commercial appliances, as defined.

   AB 27X (Koretz, et al.) – This measure would provide a sales and use tax exemption and various income tax credits and deductions with respect to purchases of power generation equipment.

   AB 51X (Daucher) - This measure would add an exemption for generators installed under a qualified interruptible service contract of 3 years or more in duration.

   AB 58X (Cox) and AB 1319 (Cox) - These measures would both provide a state tax exemption for any solar energy system designed to provide thermal energy for the purpose of heating water or providing electrical power, as specified.

   AB 124X (Pescetti) - This measure would provide a sales and use tax exemption for sales and purchases of energy efficient residential and commercial appliances, as defined.

   SB 877 (Poochigian) - This measure would exempt purchases of qualified cogeneration equipment, as defined, for use on dairy farms, and would also authorize an income tax credit for an amount equal to the portion of property taxes attributable to those fixtures and improvements to a dairy farm utilized in the cogeneration or transformation of dairy industry by-products into fuel sources used for the operation of that dairy farm.

COST ESTIMATE

Some costs would be incurred in immediately notifying affected retailers and verifying claimed exemptions. An estimate of these costs is pending.

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REVENUE ESTIMATE

Background, Methodology, and Assumptions

Solar Thermal Collectors

According to the Energy Information Administration (EIA) Annual Solar Thermal Collector Manufacturer's Survey, 1,629,000 square feet of solar thermal collectors were shipped to California in 1998. The largest end use for these solar collectors was for heating swimming pools (93%). Domestic hot water systems accounted for the other 7%. Swimming pools generally use low temperature collectors and hot water systems use medium temperature collectors.

The average price for the low temperature collectors is estimated at $2.83 per square foot and for medium temperature collectors at $11.30 per square foot. Total annual solar thermal collector expenditures in California are estimated to be $5.6 million. ((93% x 1,629,000 sq. ft x $2.83 per sq. ft) + (7% x 1,629,000 sq. ft x $11.30 per sq. ft) = $5.6 million.)

Photovoltaic Cells & Modules

A photovoltaic cell is an integrated device consisting of layers of semiconductor materials and electric contacts. A module is an integrated assembly of interconnected photovoltaic cells. According to the EIA Annual Photovoltaic Module/Cell Manufacturer's Survey, total domestic shipments of the module and cells in 1998 were 15,169 peak kilowatts. (These devices are measured in peak kilowatts, which refers to their maximum electric output.) Domestic shipments of cells were 5,475 peak kilowatts and domestic shipments of modules were 9,694 peak kilowatts.

The average price for cells is estimated to be $3,150 per peak kilowatt and for modules, $3,950 per peak kilowatt. Total annual domestic expenditures are estimated to be $55.5 million. ((5,475 peak kilowatts x $3,150 per peak kilowatt) + (9,694 peak kilowatts x $3,950 per peak kilowatt) = $55.5 million).

No figures were available showing the expenditures in California. If we assume that California accounts for 12% of these sales (California represents 12% of US population), then annual cell and module expenditures in California are estimated to be $6.7 million. (12% x $55.5 million = $6.7 million.)

Small Wind Turbines

Based on discussions with the California Energy Commission and Bergey Windpower Company, a large manufacturer of small wind turbines, it is estimated that annual expenditures for small wind turbines amount to $4.2 million.

Fuel Cells

A brief analysis of the fuel cell industry indicated that a significant number of fuel cell technologies targeted for stationary power generation are still in their demonstration stages. Specifically, light commercial and residential products are likely to be introduced in the markets around 2003.

According to International Fuel Cells (IFC), the only company in the world producing commercial stationary fuel cell systems, it has in recent times sold 2 units per year in California, amounting to $1.7 million in sales.

Microturbines

Microturbines are small combustion turbines with outputs of 25kW to 100kW. They are typically comprised of a compressor, combustor, turbine, alternator, recuperator and generator. Commercial and government consumers are the two primary market segments.

Based on discussions with companies involved in the California market, it is estimated that microturbine sales in 2001 would amount to $32.5 million.

Electrical Generators Operated By Biomass Fuel

Biomass energy uses the energy embodied in organic matter. Biomass-based energy systems utilize wood, agricultural and wood waste, municipal waste and landfill gas as fuels. There are approximately 87 operating biomass plants located within 19 states in the U.S. These plants represent about 1,582 MW of generating capacity.

According to California Biomass Energy Alliance (CBEA), there are approximately 29 biomass plants currently operating in California. Seven plants, with the capability of generating 123 MW of electricity, are described as having the potential to restart in summer. These plants are 'sales generation' plants i.e. they sell into the state's electric grid and not for internal use. Overall costs or investment to restart these 7 plants are estimated to be at least $32 million.

Total Expenditures

Total estimated expenditures for calendar year 2001 are as follows:

Type	Expenditures (in millions)
Solar Collectors	$ 5.6
Photovoltaic Cells/Modules	6.7
Wind Energy Equipment	4.2
Fuel Cells	1.7
Microturbines	32.5
Generators – Biomass	32.0
Total	$82.7

It is expected that California's current energy crisis will be an incentive to the purchase of these types of electric generating property. How much of an incentive depends on the depth and duration of the energy crisis. For this estimate, we have assumed that calendar year 2002 expenditures for these items will increase by 10% to $91.0 million.

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The annual revenue loss from exempting microturbines, fuel cells, photovoltaic cells, wind energy equipment, electrical generators operated by renewable biomass fuel or any other solar energy cell or panel from the sales and use tax would be as follows:

	Revenue Loss (in millions)	
	2001	2002
State *	$ 3.9	$ 4.6
Local (2.25%)	1.9	2.0
Special District (0.67%)	0.6	0.6
Total	$ 6.4	$ 7.2

* The state sales and use tax rate will be 4.75% for calendar year 2001 and is scheduled to be 5% in calendar year 2002.

Analysis prepared by:	Sheila T. Sarem	445-6579	04/10/01
Revenue estimate by:	Dave Hayes	445-0840	
Contact:	Margaret S. Shedd	322-2376	

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